

Remarks

Support for the antibody of Claims 22 to 26 and 29 to 30, for the monoclonal antibody of Claims 27 and 28, and for the continuous cell line of Claims 31 to 36 may be found at page 38, line 17 to page 42, line 5, as well as in Examples 9 (see page 88, lines 1 to 17).

Example 20 describes the construction of two GST-SDI-1 fusion proteins. The amino acid sequence encoded by the claimed fusion protein (i.e., the first construct) is provided in SEQ ID NO:11 (see page 116, lines 24 to 25 of the application). The plasmid containing the claimed fusion protein of SEQ ID NO:11 was deposited as ATCC 69597 (see page 116, lines 25 to 30). When the first fusion protein was provided to young cells, it was detected which indicates that this particular GST SDI-1 fusion protein had the capacity to bind cells. Only cells exposed to this fusion protein exhibited quiescence (see page 117, lines 18 to 27). The two SDI-1 fusion proteins differ only in that the first fusion protein contains a "hinge region" consisting of the amino acids of SEQ ID No. 9 (see page 117, lines 14 to 17). After the hinge region, the fusion protein contains "the ATG initiation codon of SDI-1 and the remainder of the SDI-1 encoding sequence" (see page 116, lines 17 to 22), which corresponds to SEQ ID NO:2 (page 77, line 30). Antibodies raised as described in the application can immunoprecipitate cellular and recombinant SDI-1 protein (page 88, lines 1 to 10, and page 112, lines 17 to 22).

The amino acid sequence encoded by the SDI-1 protein is shown in SEQ ID No: 2. It has the coding sequence of the cDNA insert of the plasmid contained in ATCC Deposit 69081.

The SDI-1 fragments are disclosed in Examples 21 and 23, particularly at page 118, line 18 to page 119, line 3, page 122, lines 1 to 9, page 125, lines 22 to 26, page 125, line 30 to page 126, lines 2, page 127, lines 11 to 13, page 128, line 27 to page 129, line 1, and Table 13. The active domains of SDI-1 SEQ. ID NO:2 were shown to be present in peptide fragments containing amino acids 1 to 71, 1 to 82, 1 to 123, 16 to 52, 42 to 47, 42 to 58, 42 to 71, 48 to 65, 49 to 53, 52 to 71, 53 to 58, 58 to 61, and 66 to 71, with amino acids 42 to 47 and 53 to 58 containing the most active domains. The methods described in the application to raise antibodies can be used to raise antibodies against these SDI-1 fragments.

Support for the pharmaceutical compositions of Claims 37 and 38 can be found at page 48, lines 15 to 24, in the "Methods of Administration" section at pages 63 to 72, and at page 15, lines 24 to 31, which indicates that "SDI protein molecules" of the present invention are "i.e. SDI-1, and its fusions and fragments, antibodies to such molecules, (...)"

Claim 39 is supported in Example 9 which discloses immunocytochemical assays and westerns, Examples 19 and 23 (see page 127, line 25 to page 128, line 3) which refer to immunohistochemical assays, and Example 22, which refers to immunoprecipitation.

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Respectfully submitted,

Margaret B. Kelley
Margaret B. Kelley

Reg. No. 29,181

Clifford Chance US LLP
200 Park Avenue
New York, NY 10166-0153
Telephone: (212) 878-3145